HEALTH CONSULTATION

Groundwater Wells On and Off Site
CONROE CREOSOTING COMPANY
CONROE, MONTGOMERY COUNTY, TEXAS
CERCLIS No. TXD008091951

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Prepared By:

Texas Department of Health
Under a Cooperative Agreement with the
Agency for Toxic Substances and Disease Registry

BACKGROUND AND STATEMENT OF ISSUES

The Texas Department of Health Environmental Epidemiology and Toxicology Division (TDH) under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR), reviewed environmental data to assess the potential public health impact of contamination associated with the Conroe Creosoting Company site. This health consultation was prepared to address the community's concern that area groundwater wells might be affected.

Site Description and History

The Conroe Creosoting Company (CCC) site is a former wood treatment facility outside the city limits of Conroe, Montgomery County, Texas. For more than 50 years, workers at this facility preserved wood by treating it with either pentachlorophenol (PCP), creosote, or copper-chromated-arsenic (CCA). Because groundwater wells within one mile of CCC are the source of drinking water for approximately 2,400 people, the Texas Natural Resource Conservation Commission (TNRCC)[1] tested well water samples to determine if the CCC site had affected area drinking water.

On November 27, 2001, the TNRCC collected seven well water samples from six different wells that were representative of both public water supply wells and private water wells. Each are described in more detail in Table 1. The samples were tested for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), and metals [1].

One of the wells was on the CCC property near the CCA process area. Low concentrations of VOCs, SVOCs, and metals were detected in this well; however, the concentrations measured did not exceed health-based screening values. In other words, the levels of the contaminants measured would not be likely to cause health problems for anyone who might drink or otherwise be exposed to this well water.

The other water wells tested included both public water supply wells and private, residential water wells and were representative of area groundwater. None of these wells had detectable amounts of harmful contaminants.

ATSDR'S CHILD HEALTH INITIATIVE

We recognize that the unique vulnerabilities of children demand special attention. Windows of vulnerability (critical periods) exist during development, particularly during early gestation, but

[1]The Texas Natural Resource Conservation Commission recently had its name changed to the Texas Commission on Environmental Quality (TCEQ).

also throughout pregnancy, infancy, childhood and adolescence -- periods when toxicants may permanently impair or alter structure and function [2]. Unique childhood vulnerabilities may be present because, at birth, many organs and body systems (including the lungs and the immune, endocrine, reproductive, and nervous systems) have not achieved structural or functional maturity. These organ systems continue to develop throughout childhood and adolescence. Children may exhibit differences in absorption, metabolism, storage, and excretion of toxicants, resulting in higher biologically-effective doses to target tissues. Depending on the affected media, they also may be more exposed than adults because of behavior patterns specific to children. In an effort to account for children's unique vulnerabilities, and in accordance with ATSDR's Child Health Initiative [3] and EPA's National Agenda to Protect Children's Health from Environmental Threats [4], we considered the potential exposure of children as a guide in assessing the potential public health implications of the contaminants.

CONCLUSIONS

Based on the sample results of area well water, TDH has concluded that the well water in the vicinity of the CCC site poses no public health hazard to children or adults who may use the water for drinking or other household uses.

PUBLIC HEALTH ACTION PLAN

Actions Planned

TDH/ATSDR will evaluate additional sampling data collected by the EPA as it becomes available.

Actions Recommended

None at this time.

REFERENCES

1. Texas Natural Resource Conservation Commission (TNRCC). Expanded Screening Inspection Report. Conroe Creosoting Company. June 2002.

2. U.S. Environmental Protection Agency. 2000. Strategy for research on environmental risks to children. Washington, DC: US Environmental Protection Agency, Office of Research and Development. EPA/600/R-00/068, Section 1.2.

3. Agency for Toxic Substances and Disease Registry (ATSDR). Child health initiative. Atlanta: US Department of Health and Human Services; 1995.

4. U.S. Environmental Protection Agency. The children's environmental health yearbook; 1998.

Conroe Creosoting Company Groundwater Wells On and Off Site

Table 1.

Conroe Creosoting Company Water Wells Sampled by TNRCC November 2001						
Background		On Site	Off Site			
GW-01	GW-07	GW-05	GW-02	GW-03	GW-04	GW-06
Conroe Public Water Supply Well #12 1.5 miles north of CCC site	Private water well 0.6 mile northeast of CCC site	On-site water well for CCC site between boiler and CCA process area	Water well at Conroe Truck and Tractor 2010 E. Davis 0.3 mile east of CCC site	Conroe Public Water Supply Well #5 1 mile northwest of CCC site at 1199 N 1st Street	Dup of GW-03	Residential drinking water well 295 Mabel 0.4 mile east of CCC site

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